

## REMARKS

Claims 12-16 and 20-28 are pending.

Claims 12-16 and 20-28 are rejected.

Claims 12 and 22 are amended.

### **Specification**

The Applicants have amended the title of the application to read:

A Process for Reducing Residual Monomer Concentration

No new matter has been added. Support for the amendment can be found in claim 12 and in the abstract.

### **35 USC 132**

The Office has requested that Applicants cancel "new matter". Applicants disagree with the Examiner's assessment that the amendment "and the formed polymer in step (b) is not a gelled polymer" is new matter. However, Applicants have deleted the amendment submitted on January 14, 2005. Thus the "new matter" rejection is moot.

### **Claim Rejections under 35 USC 112, first paragraph**

Claims 12, 13, 20-24 and 28 are rejected under 35 USC 112, first paragraph.

The Office states that the scope of the broad claims are not enabling for all ultraviolet initiators but only for the hydroxyalkylphenone. Applicants believe this analysis to be incorrect.

In *In re Goffe*, 542 F.2d 564, 567, 191 USPQ429, 431 (CCPA 1976) the court stated:

To provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts....

"For all practical purposes, the board would limit appellants to claims involving the specific materials disclosed in the examples, so that a competitor seeking to avoid infringing the claims

would merely have to follow the disclosure in the subsequently-issued patent to find a substitute."

The only requirement for the ultra violet (UV) initiator to work is that the UV initiator not decompose when it is present during polymerization of the polymer (page 8, first paragraph). When the UV initiator is applied to the surface of the already formed polymer, there are no particular limitation such as solubility or decomposition requirements (page 10, second paragraph). The Examiner is improperly asking that Applicants limit to the preferred embodiments. The Applicants aver that they are entitled to the broader scope as a narrowing to the preferred embodiment would enable competitors to avoid infringement by finding another substitute UV initiator.

### **35 USC 102 (e)**

Claims 12-16 and 20-28 are rejected under 35 USC 102(e) as being anticipated by Cywar.

Applicants have amended claims 12 and 22 in order to more particularly point out and distinctly claim their invention. Claim 12 has been amended to add the phrase "the formed polymer is not subjected to a comminuting step."

The amendment is supported by the disclosure on page 1, third full paragraph. The third paragraph states:

"Typically particulate polymers are prepared introducing initiators into an aqueous solution of the monomers and polymerizing to a polymer gel which is then cut into smaller pieces, dried and then ground to the appropriate particle size."

Thus, "if alternative elements are positively recited in the specification, they may be explicitly excluded in the claims." See MPEP 2173.05(i). Also see *in Re. Johnson*, 558 F2d 1008, 1019, 194 USPQ 187, 196 (CCPA1977).

Although the term comminuting is not specifically used in the disclosure, the term is synonymous with terms such as cut or ground. See MPEP 2363.07.

The mere inclusion of dictionary or art recognized definitions known at the time of filing an application would not be considered new matter. See page 2100-183 (Rev. 2, May 2004)

Cywar et al. requires a comminuting step which is emphasized throughout the Cywar disclosure. See for example,

col. 3, lines 30-34;

line 45; col. 4, lines 4-8 in particular **"Low residual monomer content is obtained according to the invention by comminuting a gelled polymer..."** ;

col. 4, lines 11-12 **"provided that such monomers must be able to form a gelled polymer capable of being comminuted..."**;

col 5, lines 52-54 **"... provided that the product of the initial polymerization is capable of being comminuted gel particles..."**;

col. 6, lines 16-21 **" the gelled polymer is subjected to a comminution process to produce particles of which preferably at least 90% by weight are less than about 9.5 mm in size..."**;

As the Applicants have amended their claim 12 to exclude this key element (comminuting the gel) of the Cywar patent, the anticipation rejection is overcome.

Applicants have amended claim 22 to include the proviso below:

"with the proviso that the water soluble or swellable polymer is not formed in the presence of an ultraviolet initiator in the absence of light."

Support for the amendment is found in original claim 1, page 3, end of paragraph 2.

Thus claim 22 now contains the above proviso. There is now no overlap with Cywar making the anticipation rejection moot.

No new matter has been added.

### **35 USC 102(b)**

Claims 12-14 are rejected under 35 USC 102(b) as being anticipated by Zhang US 5,889,073.

In Zhang a hydrophobic mixture of monomers contains a photoinitiator. Onto this photopolymerizable composition a hydrophilic mixture of monomers is applied. Both layers are exposed to UV radiation. Thus the polymerization occurs primarily in the bottom layer where the photoinitiator resides. The

hydrophilic monomer solution allegedly binds at the interface of hydrophobic polymer base and hydrophilic mixture.

Zhang discloses a composition containing hydrophilic and hydrophobic monomers. The photoinitiator has been added to the hydrophobic monomer mixture and exposed to UV light to effect polymerization. Thus the photoinitiator has substantially decomposed leaving little initiator in the postcuring reaction.

The instant claim 12 reads:

A method of reducing the residual monomer content in a water soluble or water swellable polymer by subjecting the polymer to ultra violet irradiation in the presence of an ultra violet initiator wherein the water soluble or water swellable polymer is not subjected to a comminuting step.

The instant method is quite different than Zhang's method. The photoinitiator in Zhang is used up in the preliminary polymerization of the hydrophobic monomer mixture. Note the photoinitiator is present with the monomer mixture not the formed polymer. The method of Zhang leaves an insufficient amount of initiator available to operate on the residual monomers left in the postcuring reaction. In fact, Zhang considers in column 13, lines 5-14 removing any unreacted reactants before post irradiation.

The Zhang reference differs from the present by not having photoinitiator present in the formed polymer. As the present method claims "subjecting the polymer to ultra violet irradiation in the presence of an ultra violet initiator" and Zhang discloses subjecting a monomer mixture in the presence of an ultraviolet initiator, there is no anticipation. Furthermore, there is no suggestion by Zhang to add additional active photoinitiator in the postcuring reaction.

### **Provisional Double Patenting**

Claims 12-16 and 20-28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application. No. 10/468,191 in view of Yada et al US 47,762,862.

The Office states the instantly claimed process encompasses the process steps set forth in the claims of SN 10/468,191 wherein the product of step b is subjected to irradiation in step c, resulting in reduction the residual monomer content in the water soluble or water swellable polymer.

The Applicants point out that the test for double patenting is whether or not the subject matter of the present claims are obvious based on the claims of SN 10/468,191 in view of Yada et al.

The presently claimed process may encompass or dominate the process steps set forth in the claims of SN 10/468,191. However, this by itself is not controlling as stated in *In re Braat*, 937 F.2d at 1293:

It is true that allowance of the *Braat* application will result in some timewise extension of Philips' patent protection of the Dil structure. This is because *Braat's* claims dominate the invention of Dil claims 5/1 and 6/1. As our predecessor court pointed out in *Borah*, in analyzing the *Stanley* decision, "*We see.. that as a matter of law the extension of protection objection is not necessarily controlling.*"

The determining factor in deciding whether or not there is double patenting is the existence vel non of patentable difference between two sets of claims (*In re Borah*, 354 F.2d 1009, 148 USPQ 213).

The Applicants fail to understand why the present claims are obvious in light of SN 10/468,191 claims in view of Yada.

The claims of SN 10/468,191 require two separate photoinitiators, each activated at different intensities. The present application claims a method of reducing the residual monomer content by subjecting the polymer to irradiation in the presence of an ultraviolet initiator (claims 12 and 22). SN/10/468,191 makes obvious only the use of at least two separate photoinitiators each activated at different specific intensities. The disclosure of Yada also uses two separate photoinitiators activated at quite different intensities than those used in SN/10/468,191. SN/10/469,191 claims in view of Yada provides no motivation to broaden the scope of SN/10/468,191. Thus the provisional double patenting rejection is improper.

Reconsideration and withdrawal of the rejection of claims 12-16 and 20-28 is respectfully solicited in light of the remarks and amendments *supra*.

Since there are no other grounds of objection or rejection, passage of this application to issue with claims 12-16 and 20-28 is earnestly solicited.

Applicants submit that the present application is in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



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